Application Note # 145

This application note details the differences between Cermetek Microelectronics, Inc., CH1794 (14.4Kbps), CH1798 (28.8Kbps) and CH1799 (33.6Kbps) modem products. The purpose of this application note is to facilitate upgrading designs utilizing the CH1794 modem to either the CH1798 or the CH1799 higher speed modems.

Cermetek has taken considerable care to ensure a seemless transition from the slower speed CH1794 to the higher speed CH1798 or CH1799. There are no differences in the physical form, fit or pin-out of the CH1794, 1798/99 modem products. When using a higher speed modem in a lower speed application, the speed differences can be absorbed at the time of host training of the modem. For example, a CH1799 can function as a CH1794 if it is trained with an **AT<CR>** at the 14400 data rate. Further, the upper connect speed range can be assigned or limited with the +MS command. Refer to the command descriptions below.

The following minor differences are known to exist.

"AT" Commands:

Fn Command. The ATFn command is supported by the CH1794, but not by the CH1798 or CH1799. This command allows the user to set (or limit) the connect speed thereby forcing the modem to connect at the specified speed (or within the specified range). The functionality of the ATFn command can be duplicated by using the AT+MS command, which is supported by the CH1794 as well as the CH1798/99.

Example:	Select V.32 or 9600bps as the only acceptable line modulation connect speed using the ATFn command.
Enter:	**ATF8<CR>** where **<CR>** denotes Carriage Return.
Result:	OK

Example:	Select V.32 or 9600bps as the only acceptable line modulation connect speed using the AT+MS command.
Enter:	**AT+MS9,0,2400,14400<CR>** where **<CR>** denotes Carriage Return.
Result:	OK

Refer to the detailed description of the +MS command in the AT COMMANDS & S-REGISTER Guide available on the Cermetek web site: www.cermetek.com.

In Command. This command reports the firmware version of the modem product in use. It is intended for identification purposes, and is different for the CH1794, CH1798 and CH1799 products. Care must be taken by the user to ensure that the value checked reflects the actual device used.